

DTaP

(Diphtheria, Tetanus, acellular Pertussis)



Increasing pertussis and low immunization rates are both current challenges in Washington. Pertussis is the most commonly reported vaccine preventable condition in Washington and disease rates are higher than national averages. In 2003 pertussis incidence was 13.8 per 100,000 people; the national rate was 4.1 per 100,000 people. Young children have the highest incidence out of any age group.

The 4th DTaP is due between 15-18 months; however nearly 20% of Washington children do not receive it on time. National Immunization Survey data shows that Washington has consistently achieved lower 4th DTaP immunization rates than the national average.

Why is the Fourth Dose So Important?

Children need five doses of DTaP vaccine to provide the best protection against disease. The fourth dose is the most frequently missed of the series.

Both increasing pertussis and low immunization rates make it more important than ever to ensure that young children receive all five doses. Without proper vaccination, children are susceptible to pertussis, and are most likely to suffer severe illness and serious complications.

What is the Schedule for DTaP?

The DTaP vaccine is given as a five dose series that is recommended to be administered according to the following schedule:

Dose Number	Age
1	2 months
2	4 months
3	6 months
4	15-18 months
5	4-6 years

There must be a six month interval between Dose 3 and Dose 4.

Articles

Below are two summaries of journal articles on the benefits of timely DTaP vaccination.

Article 1:

A six year sample of children age 19 to 35 months was analyzed to determine what demographics were typically associated with undervaccinated and unvaccinated children. The following data was collected from this study:

- Every year, 2.1 million children 19 to 35 months of age are undervaccinated.
- Children defined as undervaccinated received less than or equal to 1 dose of DTaP, and many children received no vaccinations at all.
- From the 151,720 sampled between 1995 and 2001, 795 children went unvaccinated.
- Parents' fear of adverse effects from vaccines and religious beliefs were the main reasons behind not vaccinating their children.

Source: Smith, Philip J., PhD, MS, and Susan Y. Chu, PhD, MSPH and Lawrence E. Barker, PhD (July 2004). Children Who Have Received No Vaccines: Who Are They and Where Do They Live? *Pediatrics*, 114(1), 187-195.

Article 2:

Physicians and staff can identify children at risk for missing the fourth DTaP dose or receiving it late by assessing timeliness of receipt of DTaP dose 3 and implementing steps to ensure that at-risk children receive dose 4 as recommended.

Source: Strine, Tara W., MPH, and Elizabeth T. Luman, MS, and Catherine A. Okoro, MS, and Mary M. McCauley, MTSC and Lawrence E. Barker, PhD (July 2003). Predictors of age-appropriate receipt of DTaP Dose 4. *American Journal of Preventative Medicine*, 25(1), 45-49.

Immunization Status	Problem	Percentage of Children Affected
Receives Dose 3 Late (but before 16 months)	Miss Dose 4	24%
Receives Dose 3 On Time	Miss Dose 4	10%
Receives Dose 3 Late (but before 9 months)	Receive Dose 4 Late	39%
Receives Dose 3 On Time	Receive Dose 4 Late	22%
Receives Dose 3 Late (but before 9 months)	Invalid Dose 4 administered	4.6%
Receives No Dose 3 (but before 9 months)	Invalid Dose 4 administered	10.6%
Receives Dose 3 On Time	Invalid Dose 4 administered	1.2%

For more information about DTaP and other immunizations, call your local health department or visit the Department of Health website: www.doh.wa.gov/cfh/immunize.

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